REMARKS

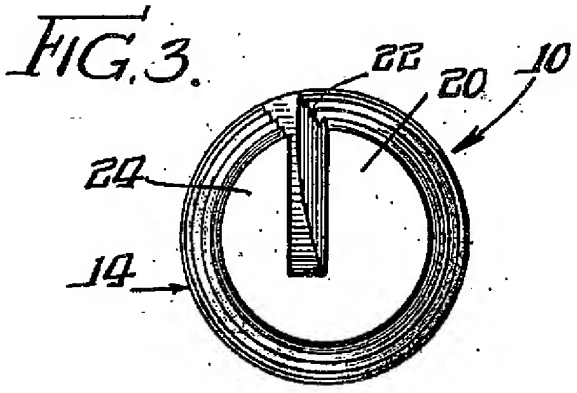
This Amendment in conjunction with filing an RCE is being submitted in an effort to materially advance prosecution of this patent application. Claim 1 has been amended for clarification and not in relation to any ground of rejection. Claims 12-14 and 16-20 have been amended for consistency of terminology with claim 1 as amended. New dependent claim 36 has been added.

The Obviousness Rejection

The Examiner has rejected previously pending claims 11-35 (claims 15, 21, and 35 are now cancelled) as obvious under 35 U.S.C. 103(a) over Olson (patent 2,130,600) in view of Guedj (patent 5,871,356). Applicant respectfully traverses this rejection.

The Olson Disclosure

This patent discloses a self-tapping, general type, threaded fastener. The self-tapping aspect is best illustrated in the bottom view of Fig. 3, reproduced below, and being also accurately depicted on page 4 of the Official Action.



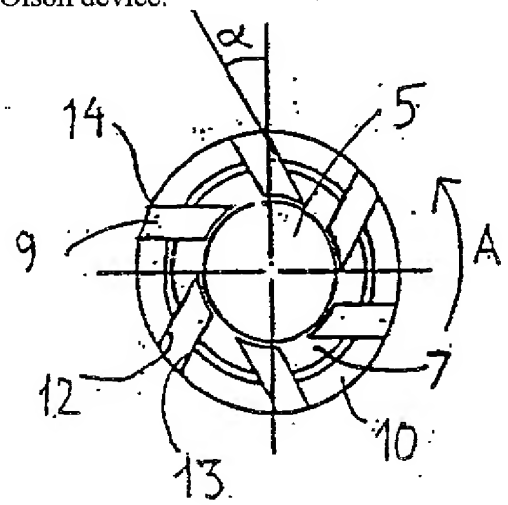
In accordance with the text of Olson, page 1, commencing at line 37, recess 18 (Fig. 1) separates the entering screw into screw section 20 having a serrated cutting edge 22 and a screw section 24 adapted to yield (or bend in) toward section 20 when the screw is initially inserted into an unthreaded hole. By bending inwardly, section 24 enhances the cutting effectiveness of serrated edge 22. All this presumes counter-clockwise rotation when viewed from the end (Fig. 3). Of course, by inspection it is clear that without the yield inwardly of section 24, there could be very

little, if any cutting action by edge 22. It should be noted that the Olson device does not have an interior cavity but, except for recess 18, the screw is a unitary, solid element.

The Invention

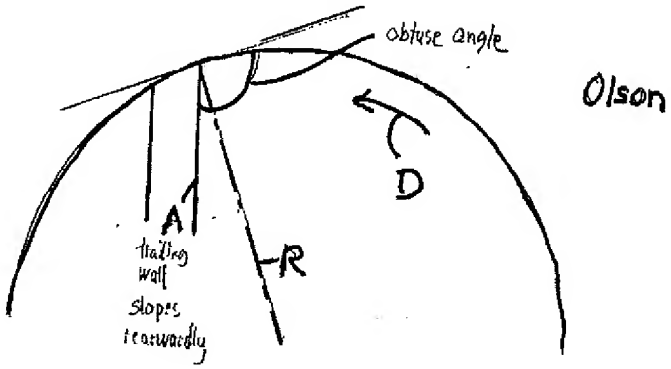
By contrast, Applicant's device does not require yielding or bending in of the leading wall or edge, because it is sloped toward, rather than away from, the material to be cut into or shaved off. The inclination angle and the improvement it provides are clearly delineated in the specification at the bottom of page 2, over to the top of page 3 (paragraph [0008] and [0009] of the published version of the application).

The invention can be seen with respect to Fig. 2, reproduced below, in a view of the type reproduced above for the Olson device.



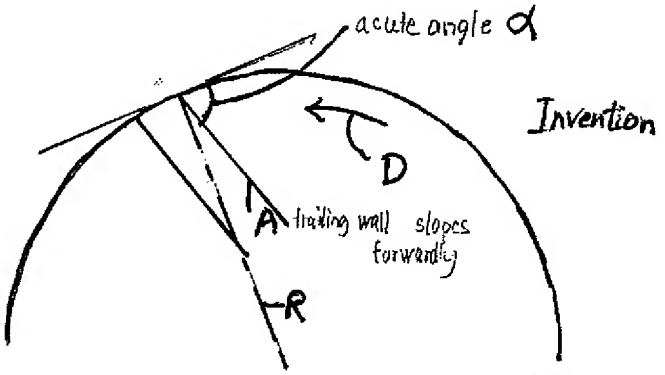
Slots 9 are at an angle α with respect to the radius and they open from the outer wall through into cavity 5. The leading (13) and trailing slot walls (12), with respect to the rotation direction A, defining cutting edge 14, are clearly described in paragraph [0030] (middle of page 6 of the specification as filed).

The Olson device is reproduced schematically below, as a means of making Fig. 3 of the reference patent somewhat simplified.



The direction of rotation is indicated by D, and R is a radial line. It can be seen that trailing wall A of the slot is at an obtuse angle with respect to the radius, so that the trailing wall (cutting edge 22) slopes rearwardly.

The present invention is reproduced schematically below, showing the subject features in a manner similar to the Olson schematic drawing above.



The structural and functional differences between Olson and Applicant's device are significant. There is no way that Applicant's structure is obvious over Olson. The Guedj reference does not address these differences so it is irrelevant to this analysis of the significant differences.

In the Olson representation, D indicates the direction of rotation, which is always relevant to a screw-type device. R is a radial line and A is the trailing wall. It is clear that wall A slopes rearwardly with respect to radius R in the direction of rotation D. As stated by Olson, the leading wall flexes inwardly to better expose the outer edge of trailing wall A for cutting purposes.

Referring now to Applicant's schematic representation, the same letters, D, R, and A refer to the same things. There can be no disputing the fact that trailing wall A slopes forwardly with respect to the radial line R in the direction of rotation D.

Now referring to the claim 1 language, we find the "trailing slot walls relate to the direction of rotation…wherein at least the radially outermost part of said trailing slot wall defines an angle α with the radial direction and slopes obliquely fowardly from within and outwardly in said direction of rotation" resulting in an acute angle for cutting edge 14. This language very specifically defines Applicant's invention, as is clearly shown in the schematics above, and the respective Figs. 3 and 2 shown earlier in these Remarks. Using similar

terminology, the trailing wall of Olson "slopes obliquely rearwardly from within and outwardly in the direction of rotation," resulting in cutting edge 22 having an obtuse angle.

There is no way this language of claim 1 can be read in Olson, because the trailing wall in Olson's direction of rotation slopes obliquely rearwardly in the direction of rotation, not forwardly. This makes a practical, functional difference in structure and how the device works to accomplish its intended purpose. As a result of this acute angle, working of the bone in the wall of the predrilled hole is achieved more effectively and more gently, such that bone fragments will be cut loose rather than being worn loose as in the case of earlier known fixtures of a corresponding kind. The acute angle thus provides a sharp edge that works in the manner of a scalpel in detaching bone fragments.

While we have fully distinguished Olson, structurally, it is also relevant that the medical professional of relevant ordinary skill would not look to metal self-tapping screws for guidance. A fixture for anchoring in bone is a very specific device including the biological interrelation between the fixture and the bone by osseiontergration. It would therefore not be obvious for the skilled person to look for relevant teachings related to screws in general. The combination of Olson with Guedj, or any other of the references related to a fixture, is very speculative and not obvious for the skilled person within this specific medical field.

CONCLUSION

Claim 1 clearly defines structure not shown or suggested by Olson. Guedj does nothing to suggest a modification which would make claim 1 obvious. Applicant respectfully requests early allowance and passage to issue of the application. Should any issues remain unresolved, Examiner Woodall is invited to telephone the undersigned attorney.

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